

ABSTRACT OF THE DISCLOSURE

5 A process for producing an adhered SOI substrate without
causing cracking and peeling of a single-crystal silicon
thin film. The process consists of selectively forming a
porous silicon layer in a single-crystal semiconductor
substrate, adding hydrogen into the single-crystal
semiconductor substrate to form a hydrogen-added layer,
adhering the single-crystal semiconductor substrate to a
supporting substrate, separating the single-crystal
10 semiconductor substrate at the hydrogen-added layer by
thermal annealing, performing thermal annealing again to
stabilize the adhering interface, and selectively removing
the porous silicon layer to give single-crystal silicon
layer divided into islands.